

ABSTRACT OF THE DISCLOSURE

A starter generator for an internal combustion engine including: a rotating electric machine having a magnet rotor mounted to a crankshaft of the internal combustion engine, and a stator with a three-phase first armature coil and a three-phase second armature coil; a first battery and a second battery connected in series or in parallel; a first driver circuit provided between the first armature coil and the first battery, and a second driver circuit provided between the second armature coil and the second battery; and an inverter that converts voltages of the first battery and the second battery into an AC voltage, wherein drive currents are supplied to the first armature coil and the second armature coil from the first battery and the second battery through switch circuits in the first driver and the second driver, when the engine is started, and induced voltages of the first armature coil and the second armature coil are supplied to the batteries through rectifier circuits in the first driver and the second driver to charge the batteries, after the engine is started.

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